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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,029	02/14/2002	Takashi Hasegawa	P/1071-1528	4961

7590

05/05/2004

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EXAMINER

JONES, STEPHEN E

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,029

Applicant(s)

HASEGAWA, TAKASHI

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 9-12 and 19 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9/4/03.

Claim Objections

2. Claim 18 is objected to because of the following informalities:

It appears that the term "tipper" should read as –upper--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yamamoto et al. of record.

Yamamoto (Fig. 1) teaches an irreversible (i.e. nonreciprocal) device including: a permanent magnet (9); a garnet ferrite which the magnet applies a magnetic flux (col. 15, line 11); center electrodes (8); an iron based yoke casing (e.g. see Col. 2, lines 52-54); the yoke has a first and second casing member (1 and 2); the base metal of the yoke is between 120 and 240 micrometers; the upper casing member is coated so as to be thicker than a coating on the lower casing member (e.g. see Col. 5, lines 61-67 and

Col. 6, lines 25-32), and the thickness of the lower casing is greater than 50% and which can be considered substantially less than 100% of the thickness amount of the upper casing since the term substantially is a broad term (Claim 1); the casing has opposing sidewalls for both the upper and lower parts (Claim 2); and the device is used in communication systems such as portable telephones which are transmission/reception devices (see Col. 1, lines 5-12) (Claim 20).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. of record.

Yamamoto teaches a nonreciprocal device as described above. However, Yamamoto does not explicitly describe that at least one of the casing members is plated consisting essentially of nickel and further silver.

Yamamoto also teaches that prior art iron yokes are generally iron plated with nickel and silver.

It would have been considered obvious to one of ordinary skill in the art to have silver plated the nickel plating in the nonreciprocal device taught by Yamamoto, because it would have been considered a mere optimization of the casing to provide a pre-selected surface resistance characteristic/conductivity.

7. Claims 3-8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokudera et al. (of record) in combination with Yamamoto et al. of record.

Yamamoto teaches a nonreciprocal device as described above. However, Yamamoto does not teach that the second casing member has a second pair of sidewalls that oppose each other (Claim 3), that the two casing members sidewalls are overlapped/joined (Claim 4); a resin casing member having contact preventing portions between respective inner surfaces of the first and second casing sidewalls (Claim 5), the contact preventing portions are thicker than the upper casing and are extended higher than the bottom of the magnet (Claims 6, 18); that the second casing member sidewalls overlap the first casing sidewalls (Claim 8).

Tokudera teaches a nonreciprocal device as described in the previous office action (which includes the limitations of Claims 3-6, 8, and 18 as described above).

It would have been considered obvious to one of ordinary skill in the art to have modified the housing in the Tokudera device to have included plating of different thickness for the upper and lower portions such as taught by Yamamoto, because it would provide the advantageous benefit of good transmission efficiency and high conductivity (e.g. see Yamamoto Col.2, lines 10-20), thereby suggesting the obviousness of such a modification. Also, regarding Claim 7, the product by process limitation of "insert molded" is not given any patentable weight since only the final

product is patentable in an apparatus claim (i.e. the resin case of Tokudera is inserted in the lower casing in the final product form and thus meets the claim limitation).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. of record in view of Prevot et al. of record.

Yamamoto teaches a nonreciprocal device as described above. However, Yamamoto does not explicitly teach that the two casing members are welded together.

Prevot teaches an isolator having yoke parts which are welded together.

It would have been considered obvious to one of ordinary skill in the art to have welded the two Yamamoto yoke parts together such as taught by Prevot, because it would have provided a well-known means for electrically connecting the two yoke portions together as a mechanically and electrically stable device unit.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. of record in view of Matsch (Electromagnetic and Electromechanical Machines) of record.

Yamamoto teaches a nonreciprocal device as described above. However, Yamamoto does not explicitly teach that the magnetic flux is unsaturated in the second casing.

Matsch teaches that at above saturation of a magnetic material the intrinsic flux density remains constant (i.e. there is little increase in flux at saturation).

Therefore, it would have been considered obvious to one of ordinary skill in the art to have the magnetic flux be unsaturated in the Yamamoto device, especially since

above saturation there is little flux gain (as suggested by Matsch), thus there would be no advantage to be at saturation.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. of record in view of Nakata et al. of record.

Yamamoto teaches a nonreciprocal device as described above. However, Yamamoto does not explicitly teach that the casing is of cold rolled carbon steel (i.e. SPCC).

Nakata teaches that SPCC can be used as a yoke magnetic flux inducing means (e.g. see Col. 6, lines 6-13).

It would have been considered obvious to one of ordinary skill in the art to have substituted SPCC such as suggested by Nakata in place of the yoke base material in the Yamamoto device, because it would have been considered a well-known art-recognized equivalent/alternative magnetic material for forming a yoke.

Response to Arguments

11. Applicant's arguments with respect to claims 1-8, 13-18, and 20 have been considered but are moot in view of the new ground(s) of rejection using the Yamamoto et al. reference of record.

Conclusion


12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Stephen Jones
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SEJ